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## The Russian Comitative Construction as Reciprocal Conjunction

### Abstract

Open DownloadShare× The tendency of the Russian comitative construction to be interpreted collectively has raised a debate as to whether this construction denotes sums, like and-coordination, or denotes groups. I propose a more detailed mechanism explaining how the meaning of this construction is derived, and, relying on insights from the theory of possessives, I argue that the RCC should be treated as an instance of reciprocal conjunction. This more specific way to approach the RCC addresses the long-reported speakers' intuition that this construction is best used when its members are "somehow related" or when the events in question occur in spatiotemporal proximity. Furthermore, my approach explains why the RCC can still be interpreted distributively when the abovementioned relatedness requirement is met, even as the collective interpretation might be strongly preferred.

# The Russian Comitative Construction as Reciprocal Conjunction

Sofia Kasyanenko

## 1 Introduction

This paper provides a new account of the Russian comitative construction (RCC). I introduce additional data on the construction, discuss the previously ignored requirement that the members of the construction need to be related in some salient way, and present a new analysis of the construction based on the theories of reciprocal conjunction (Staroverov 2007) and possessives (Barker 2011).

The RCC is formed by a noun phrase and a prepositional phrase headed by the preposition *s* 'with', which takes an instrumental complement. In the subject position, the RCC triggers plural agreement on the verb (1). The RCC can coordinate proper nouns (2), common nouns (3), or the combination thereof (4).

(1) [NP-NOM [with NP-INS]] V-PL

(2) Vani-a            s            Pet-ej            gulial-i            po parku.            Russian  
John-NOM        with    Peter-INS        walked-PL        at park  
'John and Peter walked in the park (together).'

(3) Malchik s        devochk-oi        gulial-i            po parku.            Russian  
boy-NOM with    girl-INS            walked-PL        at park  
'A boy and a girl walked in the park (together).'

(4) Vani-a            s        devochk-oi        gulial-i    po    parku.            Russian  
John-NOM        with    girl-INS            walked-PL at    park  
'John and a girl walked in the park (together).'

While the RCC is typical for Slavic languages (Dyła 1988, Skrabalova 2003), it is not present in English. The RCC is often compared to the ordinary *and*-coordination (5) and to VP-adjuncts (6), both found in English. McNally (1993) shows that, unlike *and*-coordination, the RCC only coordinates NPs, and forms a constituent with the head noun phrase, unlike VP-adjunction.

(5) *And*-coordination

a. Vani-a            i            Peti-a            gulial-i    po    parku.            Russian  
John-NOM        and    Petia-NOM        walked-PLat    park  
'John and Peter walked in the park.'

English

b. John and Peter walked in the park.

English

(6) Comitative VP-adjuncts

a. Vani-a            gulial            po            parku    s            Pet-ei.            Russian  
John-NOM        walked-SG        at            park    with    Peter-INS  
'John walked in the park with Peter.'

b. John walked in the park with Peter.

English

As indicated in the examples above, the RCC is best translated onto English as if the sentence contained a silent collectivizing adverbial *together*. However, certain aspects of the interpretation of the RCC are different from the interpretation of *together*. The following section addresses these differences.

## 2 Interpretation of the Russian Comitative Construction

At first glance, the RCC is very similar to *and*-coordination: it combines with distributive (7a), mixed (7b) and collective (7c) predicates. Certain differences do exist, however. First, the RCC cannot be interpreted intesectively: (8a) gets no interpretation, unlike (8b).

- (7) *distributive / mixed / collective*
- a. Mash-a s      Pet-ei    ulybnul-i-s / postroil-i plot / byl-i paroj / vstretil-i-s.      RCC  
 M-NOMwith    P-INS    smiled-PL / built-PL raft / were-PL couple / met-PL  
 ‘Mary and Peter smiled / built a raft / were a couple / met.’
- b. Masha i      Petia    ulybnul-i-s / postroil-i plot / byl-i paroj / vstretilis.      *and*  
 M-NOMand    P-NOM    smiled-PL / built-PL raft / were-PL couple / met-PL  
 ‘Mary and Peter smiled / built a raft / were a cou-PL / met.’
- (8) Intersective:
- a. \*Vania xudozhnik      s      poet-om      RCC  
 John artist-NOM      with      poet-INS
- b. Vania xudozhnik      i      poet.      *and*-coordination  
 John artist-NOM      and      poet-NOM  
 ‘John is an artist and a poet.’

Second, the RCC is further pragmatically limited in its interpretation as it is more likely to be interpreted collectively than *and*-coordination. For example, with no context, (9) can only be interpreted collectively. However, the distributive interpretation is not completely blocked. The example in (10), which has a contrastive clause *a ja net* (‘but me not’), can be interpreted both distributively and collectively.

Third and finally, the RCC can indicate the spatiotemporal proximity of the events in the denotation of the sentence (11). (11a) is likely to mean that Mike and Peter entered that the classroom simultaneously.

- (9) Mash-a s      Pet-ei    postroil-i plot.      collective  
 M-NOM with    P-INS    built-PL raft
- ‘Mary and Peter built a raft (together).’
- (10) Mash-a s      Pet-ei    kupil-i    uchebnik, a ja net.      distributive/collective  
 M-NOM with    P-INS    bought-PL textbook but me not  
 ‘Mary and Peter bought a textbook and I did not.’
- (11) Mash-a s      Pet-ei    voshl-i      v      klass.      spatiotemporal  
 M-NOM with    P-INS    entered-PL    in    classroom  
 ‘Mary and Peter entered the classroom (together).’

From examples (9) and (11), it may appear that the interpretation of the RCC is similar to the interpretation of the collectivizing adverbial *together* (Russian *vmeste*). However, speakers report on a requirement that further conditions the use of the RCC, which I call the Relatedness Requirement. Speakers claim that the RCC is best used when the individuals in the denotation of the construction stand in some salient relation with each other. That is, examples in (9)-(11) are most appropriate when Mary and Peter are saliently related.

- (12) Context: *Mary and Peter are siblings.*
- Mash-a s      Pet-ei    kupil-i      uchebnik.      distributive  
 M-NOM with    P-INS    bought-PL    textbook  
 ‘Mary and Peter each bought a textbook.’

- (13) a. ?Eti dva cheloveka xudozhnik s poet-om.  
 These two persons artist-NOM with poet-INS  
 Intended reading: ‘These two people are an artist and a poet.’
- b. Eti dva cheloveka xudozhnik s poet-om  
 these two persons artist-NOM with poet-INS  
 kotorye nenavid-jat drug druga.  
 who hate-PL each other  
 ‘These two people are an artist and a poet who hate each other.’

The relation between the individuals in the denotation of the construction can be deduced from the context (12) or introduced in a relative clause (13). Importantly, the relatedness between the members of the RCC makes it easier for the speakers to interpret the RCC distributively. For example, (12) is more likely to be interpreted distributively in the context that Mary and Peter are related (i.e. are *siblings*) than without it. Furthermore, the relatedness requirement becomes mandatory in certain cases. Speakers tend to reject sentences as in (13a) as the relation between a random artist and a random poet is unclear, but the relative clause in (13b), explaining that relation, drastically improves the sentence’s acceptability.

### 3 Theories of the RCC

Two major accounts of the RCC are available in literature: McNally (1993) and Dalrymple et al. (1998). McNally (1993) claims that the RCC is a case of group coordination. According to McNally, the RCC is a case of Landman’s group (1989) or the Linkian impure atom (1983). McNally recognizes the Relatedness Requirement and proposes that this requirement is a conventional implicature that the individuals in the denotation of the construction are ‘groupable’ in some intuitive way. McNally’s account wrongly predicts that the distributive interpretation of the RCC is always blocked, contrary to the speaker’s intuition, as reported in (10 - 12).

Dalrymple et al. (1998) recognize the problems of McNally’s account and propose that the RCC is a case of sum coordination (like *and*-coordination). They argue that the sum denotation of the RCC is a more salient referent than the individual denotations of the members of the RCC. The salience of the RCC’s sum denotation blocks the application of distributive operators and makes the collective interpretation more salient. Thus, Dalrymple et al. assume that collectivity and distributivity are interpretational properties that depend on the context, not just on the meaning of the conjoined phrase, and this assumption is contrary to the current theories of collectivity and distributivity. Their account predicts that a sentence with the RCC can be interpreted distributively only when the collective interpretation is not available. This claim is mistaken: sentences with a mixed predicates like *kupit uchebnyk*, such as (10) and (12), can be interpreted both collectively and distributively.

### 4 My Theory

I argue that the RCC is a case of reciprocal conjunction, similar to relational-noun coordination (i.e. *husband and wife*). My analysis explains the speakers’ reporting that the RCC is best used when the individuals in the denotation of the RCC are ‘somehow related’, a requirement that has remained largely overlooked by the previous accounts. Furthermore, my analysis makes correct predictions about the distributive interpretation of the RCC, in contrast to the previous accounts.

- (14) Vani-a s Pet-ej gulial-i po parku. Russian  
 John-NOM with Peter-INS walked-PL at park  
 ‘Peter’s John and John’s Peter walked in the park.’

For the compositional analysis of the RCC, I combine Staroverov’s theory of reciprocal conjunction (2007) and Barker’s theory of possessives (2011). I assume that proper nouns (*john*) are individuals of type *e* (15a), common non-relational nouns are sets of individuals (*et*) (15b) and

relational nouns are sets of ordered pairs of individuals ( $\langle e, et \rangle$ ) (15c). I employ Barker's  $\pi$  operator that takes a common non-relational nominal and returns a relational nominal (16a), Staroverov's *inv* operator that inverses a relation, and Staroverov's special collectivity operator *coll* that takes a relation and returns a pair of individuals connected by that relation. I will also employ also *ident*,  $\iota$  and Landman's  $\uparrow$ .

- (15) a.  $\llbracket \text{John} \rrbracket = j$   $e$   
 b.  $\llbracket \text{poet} \rrbracket = \lambda x. \text{poet}(x)$   $et$   
 c.  $\llbracket \text{husband} \rrbracket = \lambda x \lambda y. \text{husband}(x)(y)$   $\langle e, et \rangle$   
     'y is a husband of x'

(16) Type shifters:

- a.  $\pi = \lambda P \lambda x \lambda y. P(y) \wedge R(x)(y)$  (Barker, 2011)  
 $\llbracket \text{John's cloud} \rrbracket = \pi(\text{cloud})(j) = \lambda y. \text{cloud}(y) \wedge R(j)(y)$   
*R* is a free (pragmatically controlled) standing for the possession relation  
 b.  $\text{inv} = \lambda Y \lambda u \lambda v. Y(v)(u)$  (Staroverov, 2007)  
 $\text{inv}(\text{husband}) = \lambda u \lambda v. \text{husband}(v)(u)$   
 c.  $\text{coll} = \lambda R \lambda Z \exists x \exists y. Z = x \oplus y \wedge R(x)(y)$  (Staroverov, 2007)  
 $\text{coll}(\text{husband}) = \lambda Z \exists x \exists y. Z = x \oplus y \wedge \text{husband}(x)(y)$

The meaning of the preposition *s* 'with' in the RCC is in (17a). (17b) is the derivation of the relational-noun case (*husband and wife*), (17c) is the derivation of the proper-noun case (*Mike and Peter*) and (17d) is the derivation of the common-noun case (*artist and poet*).

- (17) a.  $\llbracket s \rrbracket = \lambda A_{\langle e, et \rangle} \lambda B_{\langle e, et \rangle}. \text{coll}(B \cap \text{inv}(A))$   
 b.  $\llbracket \text{muzh s zhenoj} \rrbracket = s(\text{wife})(\text{husband}) = \lambda X \exists x \exists y. X = x \oplus y \wedge \text{husband}(x)(y) \wedge \text{wife}(y)(x)$   
 c.  $\llbracket \text{Misha s Petej} \rrbracket = s(\pi(\text{ident}(p)))(\pi(\text{ident}(m))) = \lambda X. X = m \oplus p \wedge R_1(p)(m) \wedge R_2(m)(p)$   
 d.  $\llbracket \text{xudozhnik s poetom} \rrbracket = s(\pi(\text{poet}))(\pi(\text{artist})) = \lambda X \exists x \exists y. X = x \oplus y \wedge \text{poet}(y) \wedge R_1(x)(y) \wedge \text{artist}(x) \wedge R_2(y)(x)$

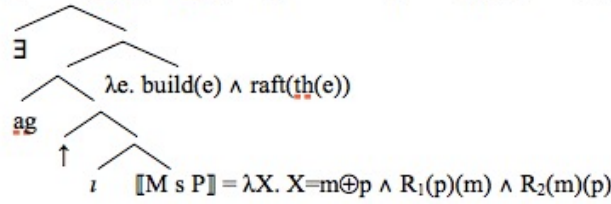
I claim that the RCC denotes a sum, while the individuals in the denotation of the RCC are related by  $R_1$  and  $R_2$ , which are supplied by the context or the relational clause. In a way, my account follows Dalrymple et al (1998), but I also argue that the tendency of the RCC to be interpreted collectively, indicate spatiotemporal proximity or a relationship between the individuals in the denotation of the construction is the manifestation of the relatedness requirement, which can be met in a number of ways, as follows.

## 5 Ways to Meet the Relatedness Requirement

I propose that the relatedness requirement can be met by a number of strategies. The first strategy is the collective strategy, which results in the collective interpretation of the construction, as in (18). As with *and*-coordination, the collective interpretation is formed with Landman's group forming operator  $\uparrow$  (1989) (18b). Then, the salient relation between the individuals in the denotation of the RCC would be that they are related by the task they participate in collectively (18c). In terms of relational nouns, it can be said that individuals in the denotation of the RCC are *colleagues*. Note that when the RCC is in the subject position, the relatedness requirement becomes a presupposition, because of the application of  $\iota$  (18b).

- (18) a. Masha            s            Petej    postroili plot.  
       M-NOM            with    P-INS    built-PL raft  
       'Mary and Peter built a raft (together).'

b.  $\exists e. \text{build}(e) \wedge \text{raft}(\text{th}(e)) \wedge \text{ag}(e) = \uparrow[\iota X. X=m \oplus p \wedge R_1(p)(m) \wedge R_2(m)(p)]$



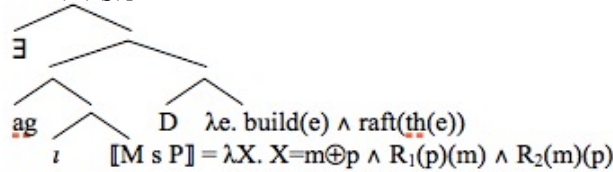
c. Relatedness Requirement:  $R_1 = R_2 = \lambda x \lambda y. \exists e \text{ag}(e) = \uparrow(x \oplus y)$  in terms of relational nouns:  $R_1 = R_2 = \lambda x \lambda y. \text{colleague}(x)(y)$

The second strategy is the relational strategy reflected in speakers' reporting that the RCC is best used when the individuals in the denotation of the construction stand in some salient relation. The relational strategy applies when the relation between the individuals in the denotation of the construction can be deduced from the context (19a). In such a case, the construction can be interpreted distributively via application of distributive operators. The salient relations between the members of the construction are thus provided by the context. In (19d), Mary is Peter's daughter, and Peter is Mary's father.

(19) Context: *Mary is Peter's daughter.*

a. Mash-a            s            Pet-ej    postroil-i            plot.  
       M-NOM           with        P-INS    built-PL            raft

b.  $\exists e_1, e_2. \text{build}(e_1) \wedge \text{build}(e_2) \wedge \text{raft}(\text{th}(e_1)) \wedge \text{raft}(\text{th}(e_2)) \wedge \text{ag}(e_1)=m \wedge \text{ag}(e_2)=p \wedge R_1(p)(m) \wedge R_2(m)(p)]$



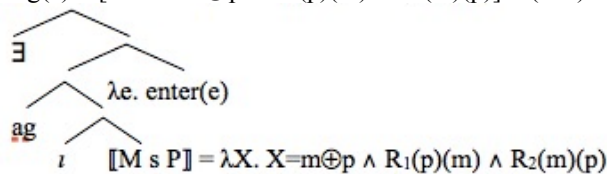
c.  $\exists e. \text{build}(e) \wedge \text{raft}(\text{th}(e)) \wedge \text{ag}(e) = \uparrow[\iota X. X=m \oplus p \wedge R_1(p)(m) \wedge R_2(m)(p)]$

d. Relatedness Requirement:  $R_1 = \lambda x \lambda y. \text{daughter}(x)(y)$ ,  $R_2 = \lambda x \lambda y. \text{father}(x)(y)$

The third strategy is the spatiotemporal strategy, which also allows for the distributive interpretation of the RCC, as in the case of distributive *voiti* (English *enter*) (20). The relatedness requirement is satisfied by the presupposition that the individuals in the denotation of the RCC participate in some events with the identical spatiotemporal characteristics, namely, the events in the denotation of the sentence. In terms of relational nouns, these individuals can be called *companions* or *fellows* (Russian *poputchik*).

(20) a. Mish-a            s            Pet-ei    voshl-i            v            klass.  
       M-NOM           with        P-INS    entered -PL        in            classroom  
       'Mike and Peter entered the classroom (together).'

b.  $\exists e. \text{enter}(e) \wedge \text{ag}(e) = [\iota X. X=m \oplus p \wedge R_1(p)(m) \wedge R_2(m)(p)] = (20c)$



c.  $\exists e_1, e_2. \text{enter}(e_1) \wedge \text{enter}(e_2) \wedge \text{ag}(e_1)=m \wedge \text{ag}(e_2)=p \wedge R_1(p)(m) \wedge R_2(m)(p)$

- d. Relatedness Requirement:  $R_1 = R_2 = \lambda x \lambda y \exists e_1, e_2. ag(e_1)=x \wedge ag(e_2)=y \wedge |(e_1)=\tau(e_2)$   
 in terms of relational nouns:  $R_1 = R_2 = \lambda x \lambda y. companion(x)(y)$  (Russian *poputchik*)

The fourth and final strategy remaining to be described is the contrastive strategy. The RCC is more likely to be interpreted distributively if the sentence contains a contrastive clause. Consider an example from Dalrymple et al.: (21a) gets both interpretations, distributive and collective, whereas (21b) makes the distributive interpretation virtually unavailable.

- (21) a. Mish-a            s            Pet-ei    pechatal-i-s       v        NLLT a ja tol'ko v LI.  
           M-NOM            with    P-INS    published-PL       in        NLLT but I only in LI  
           Collective ✓ Distributive ✓  
           (Dalrymple et al. 1998, (9a))
- b. Mish-a            s            Pet-ei    pechatal-i-s       v        NLLT.  
           M-NOM with P-INST publishedPL in NLLT  
           Collective strongly preferred

Speakers' intuition is that (21a) can be interpreted distributively because the contrastive clause suggests that Mike and Peter are the only two people among the two of them and the speaker who published in NLLT. That is, they must be related by virtue of being the only individuals having this property. Formally, this idea is still to be borne out, and the discussion in Staroverov (2007) suggests a pathway to the analysis. Staroverov discusses restrictions on reciprocal conjunction and proposes that two (possibly identical) relations  $R_1$  and  $R_2$  allow for reciprocal plurality iff they are Strawson-inverses (where  $A$  Strawson-entails  $B$  iff the conjunction of  $A$  and the presupposition of  $B$  entails  $B$ ). This requirement is indeed met if the members of the RCC are the only individuals in the denotation of the predicate and are saliently related by virtue of being in the denotation of the predicate.

## 6 Conclusion

In this paper, I provide a new account of the Russian comitative construction. I show that the previous accounts make incorrect predictions and overlook the speakers' intuition that the RCC is best used when the members of the construction are "somehow related." I call this restriction the relatedness requirement and propose that the tendency of the RCC to be interpreted collectively or to indicate the spatiotemporal proximity of the events in the denotation of the sentence are also the manifestations of the same requirement.

I propose that the RCC is a case of reciprocal conjunction, similar to the cases of relational-noun coordination. I propose four pragmatic strategies to meet the relatedness requirement that result in different readings of the RCC: the collective, relational, spatiotemporal and contrastive strategies.

To conclude, I would like to point out that analyzing the RCC as a case of reciprocal conjunction can help build a link between the RCC and languages that lack similar comitative constructions, such as English. English, for instance, is capable of coordinating bare nouns (22).

- (22) a. He had pad and pencil to picture the whole event.

- b. Charles went to a wedding. Bride and groom looked happy.  
 (Bruyn and de Swart 2014:1216, 1221)

Bare noun coordination is more limited in English than the RCC is in Russian. Intuitively, though, bare noun coordination is best translated to Russian using the RCC. Indeed, Le Bruyn and de Swart (2014)'s matchmaking semantics analyzes bare noun coordination as a case of reciprocal conjunction, similar to the RCC.



My analysis of the RCC leaves a number of questions open. What does it mean that the members of the construction are saliently related? What counts as a relation that is salient enough? Does this relation have to be expressed in terms of relational nominals? The complexities that pertain to our understanding of the various types of coordination and relatedness within pluralities call for further inquiry.

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